

ABSTRACT

Organophosphorus compounds comprising a polysulfide bridge

The invention relates to organophosphorus compounds comprising a polysulfide bridge, to their process of preparation and to their use as coupling agent between an inorganic or metal filler and an elastomer.

The compounds correspond to the formula (I) $(\text{RO})_{2-t}\text{R}^1_t\text{P}(\text{O})-\text{O}_x-(\text{CH}_2)_y-\text{S}_z-(\text{CH}_2)_y-\text{O}_x-\text{P}(\text{O})(\text{OR})_{2-t}\text{R}^1_t$ in which R represents a hydrogen, an alkyl, an aryl, a trialkysilyl, a trialkylamino or an alkali metal; R^1 represents an alkyl or an aryl; x is 0 or 1; y is an integer from 1 to 22, preferably from 2 to 4; $z \geq 3$; t is 0 or 1.